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EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 10/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/602,013

Applicant(s)

BLUM ET AL. ✓

Examiner

Jordan M. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 259-312 is/are pending in the application.
- 4a) Of the above claim(s) 305-309, 311 and 312 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 272 is/are allowed.
- 6) ☒ Claim(s) 259-271, 273, 274, 278-284, 287-304 and 310 is/are rejected.
- 7) ☒ Claim(s) 275-277, 285 and 286 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13, 16.
- ☐ Interview Summary (PTO-413) Paper No(s). _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Newly submitted claims 305-309 and 311-312 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

This application contains claims directed to the following patentably distinct species of the claimed invention: Group I, claims 259-304, and 310 directed to a species of electro-optic lens comprising a lens having a first focal length, an electro-active region coupled to the lens, and the electro-active region when activated creating more than one focal length for the lens system; Group II, claims 305 and 311, directed to a species of electro-active lens comprising a lens optic with a diffractive pattern etched onto a side of the optic adjacent an electro-active layer and in optical communication with the layer; Group III, claims 306 and 312, directed to a species of electro-active lens comprising a conductive layer comprising a pattern of electrodes electrically connected to an electro-active layer; Group III, claim 307, directed to a species of electro-active lens comprising a lens optic in optical communication with an electro-active layer and the electro-active lens providing a reading zone when activated; Group IV, claim 308, directed to a species of electro-active lens comprising a lens optic in optical communication with an electro-active layer and the electro-active lens providing distance correction when unactivated; Group V, claim 309, directed to a species of electro-active lens comprising a lens optic in optical communication with an electro-active layer and the electro-active lens providing an intermediate distance correction when activated. Currently, no claim is generic.

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Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 305-309 and 311-312 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 264-265, 282 and 293 are rejected under 35 U.S.C. 102(b) as being anticipated by Piosenka patent no. 5,359,444.

Piosenka reads on these claims by disclosing the limitations therein including the following: an optical system comprising a lens having a first focal length (Figure 8, column 4, line 20, i.e. lens shaped shell "41" as a lens with a first focal length); an electro-active region coupled to the lens (column 4, lines 18--33 i.e. the liquid crystal material as within the shell and therefore "coupled" to the lens shell); and when activated altering the focal length to a second focal length differing from the first focal length (abstract). Piosenka further discloses the system having two focal lengths when the electro-active region is activated (column 4, line 56 to column 5, line 9 re "variable focal lengths"); the outside surfaces of the electro-active region as apparently equidistant from each other (Figures 9-10); and the fixed outer surface of the electro-

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active region facing away from the wearer having a radius of curvature apparently equal to and therefore "proportional" to a radius of curvature of the lens adjacent to the electro-active region (Figures 9-10). In reference to claims 282, Piosenka further discloses the electro-active region adjusting for astigmatism (column 6, lines 30-41) and will therefore inherently subtract out or offset the astigmatism created by the correction and correcting for prism (column 6, line 34) and therefore will inherently include "an image shifting prismatic zone in the electro-active region". In reference to claim 293, when activated and when viewing a near object the electro-active region will define a near vision region and since it is located throughout the optical zone (Figure 8) then it will inherently include a portion intermittently above a 180 degree meridian of the lens.

Claims 264-265 and 293 are rejected under 35 U.S.C. 102(b) as being anticipated by Kern patent no. 4,601,545.

Kern reads on these claims by disclosing the limitations therein including the following: an optical system comprising a lens having a first focal length (Figures 7a and 7b and column 6, lines 33-51 i.e. the fresnel lens can be considered the lens having the first focal length). Kern further discloses an electro-active region coupled to the lens (column 6, line 38); and when activated altering the focal length to a second focal length differing from the first focal length (abstract). It is believed that the system of Kern could inherently having two focal lengths when the electro-active region is activated, this being reasonably based upon Kern disclosing that "various electrode arrangements can be provided to create different optical effects" (column 5, line 40); the outside surfaces of the electro-active region as apparently equidistant from each other (Figure 3); and the

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fixed outer surface of the electro-active region facing away from the wearer having a radius of curvature apparently equal to and therefore "proportional" to a radius of curvature of the lens adjacent to the electro-active region (Figure 3). In reference to claim 293, when activated and when viewing a near object the electro-active region will define a near vision region and since it is located throughout the optical zone (Figure 3) then it will inherently include a portion intermittently above a 180 degree meridian of the lens.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 259-263, 268-271, 273-274, 278-281, 283, 287-292, 296-297, 301-304 and 310 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese document no. 55-76323 (hereinafter referred to as "Japanese'323")

Japanese'323 discloses the limitations therein including the following: an optical system comprising a lens having a first focal length (see entire document and Figure 1 re the "main part" i.e. the distant vision part as the "first focal length"); an electro-active region coupled to the lens (English abstract and Figure 1 re liquid crystal within the cavity part "4" that is "coupled" to the main part); the electro-active region when activated altering the focal length of a first portion to a second focal length different from the first focal length (entire document re when activated the focal length of the distant

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vision part that corresponds to cavity part "4" becomes a near and intermediate part therefore the focal length of the near or distant part after activation can be considered as the "second focal length"). Japanese'323 further discloses the electro-active region positioned to refract less than all of the light passing through the lens when the system is in use (Figure 1).

In reference to the claimed "altering the focal length of a first portion of the lens system above a 180 degree meridian", applicant is broadly claiming "An optical lens system comprising" and is not claiming for example "An ophthalmic lens" (which would require upper and lower to have meaning since the lens is worn in a certain position). Therefore, taking the "optical lens system" of Japanese'323 and holding it in an upside down position would satisfy all of the structural limitations of independent claims 259 and 304 including "altering the focal length above a 180 degree meridian of the lens". Regardless, Japanese'323 further discloses the following: Japanese'323 discloses that the near vision ball region "4" can include shapes such as oval, elliptical, or arch shaped (English translation, page 4). The circular shape of Figure 1 almost reaches the 180 degree meridian. An oval, elliptical or arch shaped of the ball region "4" would inherently extend this region upwards towards and probably inherently into, the upper half of the lens i.e. "above a 180 degree meridian of the lens". Regardless, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the section "4" of Japanese'323 as having just a small portion extending into the upper half of the lens (and therefore having "a first portion above a 180 degree meridian") since Japanese'323 teaches that the shape of region "4" can be oval,

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elliptical or arch shaped region to provide the required near correction (English translation, page 4) which would make obvious to have region "4" extended to have at least a small part of it in the upper half of the lens and the small part above the upper half could be considered as "a first portion above a 180 degree meridian". Furthermore, Japanese'323 further teaches that an intermediate region can also be electro-active (English translation, page 1) and can be located "above the small ball i.e. in a location near the optical core of the main ball" to provide intermediate vision correction (English translation, page 5). Having this electro-active intermediate region located above ball "4" would inherently place at least a portion of it in the upper half of the lens i.e. "above a 180 degree meridian of the lens". Regardless, it would have been further obvious to a person of ordinary skill in the art at the time the invention was made to have the electro-active region "altering a first portion above a 180 degree meridian of the lens" since Japanese'323 teaches that an electro-active intermediate correction region can be located above the region "4" which would therefore make obvious having at least a portion of this intermediate region as extending into the upper half of the lens i.e. "above a 180 degree meridian of the lens".

Japanese'323 further discloses a controller (see entire document). Having the controller with a delay apparently solves no stated problem and would be an obvious matter of design choice. Japanese'323 further discloses that the spectacles can have an auto focuser, which would inherently require containing the power prescription of the eye of the user and would inherently require the use of a rangefinder. Having the rangefinder coupled to the lens as opposed to the frame apparently solves no stated

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problem and would be an obvious matter of design choice. In reference to claims 262-263, Japanese'323 discloses that when activated the portion "4" changes from a distant part to a near and intermediate part (see entire document) and therefore the near part can be considered as the "second focal length" and the intermediate part as the "third focal length". Japanese'323 discloses that when the electro-active region is not activated it provides distance correction and it is believed that this distance correction would inherently be adapted to correct to 20/20 vision, this being reasonably based upon lenses typically providing for at least this amount of correction. Japanese'323 further discloses the electro-active region off-center of the lens (Figure 1b); the electro-active region including a liquid crystal (English abstract). In reference to claims 289-292, the "main part" of the lens and the "ball part" when not activated is disclosed as a distance vision portion (see entire document). Therefore, if the electro-active region failed, the system would inherently revert to a distance vision focal length, which is the focal length of the lens. In reference to claim 304, Japanese'323 discloses a lens having a fixed focal length (see entire document i.e. the focal length of the main part not effected by activation as a distant vision correcting part); an electro-active region coupled to it (English abstract and Figure 1 re ball part "4"); the coupled lens and electro-active region creating more than one simultaneous focal length when activated (see entire document). The simultaneous focal lengths can either be considered as the distant vision focal length in the main part (which is unaffected by the activation) and the focal length of the near part when activated or can be considered as the focal length of the near part and the intermediate part as the two differing focal lengths. The examiner

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takes Judicial Notice that it is well known in the art of optical lenses, including electro-optic lenses to have such lenses in the form of semi-finished lens blanks. Having the electro-optic region as centered on the lens would be an obvious matter of design choice depending upon the type of optical correction required.

In reference to claims 270-271, 273, 279-281, Japanese'323 disclose as is set forth above and further disclose the lens used for Eyeglasses (see abstract). However, the reference does not specifically disclose the eyeglass lens having a scratch resistant coating, anti-reflective coating, axis correction for a user, tint or photochromic effect. However, it is well known in the art of eyeglass lenses for such lenses to include these features (including being electro-activated), for the purpose of providing eyeglasses of improved durability, cosmetic effect and visual correction. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the eyeglasses of Japanese'323 as including these additional features since it is well known in the art of eyeglass lenses for such lenses to include these features for the purpose of providing eyeglasses of improved durability, cosmetic effect and visual correction.

Claim 284 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese'323 in view of Quaglia.

In reference to claim 284, Japanese'323 discloses as is set forth above but does not disclose the lens system supported by a phoropter. However, applicant is in effect claiming the lens system for use with a phoropter. It has been held that a recitation to the manner in which a claimed apparatus is intended to be employed does not

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differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the lens of Japanese'323 supported by a phoropter since Japanese'323 disclose all of the structural limitations of the lens system and the supported by a phoropter goes to the intended use of the lens system. Regardless, Quaglia teaches that eyeglass lenses that provide variable focusing (Figure 17, column 12, line 56 to column 13, line 13) can further be supported by a phoropter in order for the lenses to be used for eye examination (figure 21, column 13, line 44 to column 16, line 20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the lens of Japanese'323 as supported by a phoropter since Quaglia teaches that eyeglass lenses that provide variable focusing can further be supported by a phoropter in order for the lenses to be used for eye examination.

Claims 266-267, 294-295 and 298-300 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese'323 in view of Piosenka et al.

In reference to claims 266-267 and 294-295, Japanese'323 discloses as is set forth above and Piosenka et al teaches that in electro-optic ophthalmic lenses, the electro-active region can be in the form of pixilated regions and that the electro-active region can include a diffractive surface for the purpose of providing the optical correction (column 1, line 34 to column 2, line 11, column 4, lines 3 to column 5, line 8). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the electro-active lens of Japanese'323 as further

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including a pixilated region or a diffractive surface since Piosenka et al teaches that in electro-optic ophthalmic lenses, the electro-active region can be in the form of pixilated regions and that the electro-active region can include a diffractive surface for the purpose of providing the optical correction. In reference to claims 298-300, Japanese'323 discloses as is set forth above and further discloses the lens including a presbyopic correction region (see English translation). Piosenka et al further teaches that in electro-optic ophthalmic lenses, the electro-active region can be adapted to correct for astigmatism for the purpose of providing the required optical correction of the user (column 6, lines 30-41). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the electro-optic ophthalmic lens of Japanese'323 as further including the electro-optic region adapted to correct for astigmatism since Piosenka et al further teaches that in electro-optic ophthalmic lenses, the electro-active region can be adapted to correct for astigmatism for the purpose of providing the required optical correction of the user. Furthermore, astigmatic correction will inherently subtract out or offset the astigmatism created by the correction region.

Allowable Subject Matter

Claim 272 is allowed.

Claims 275-277 and 285-286 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with respect to claim 272, none of the prior art either alone or in combination disclose or teach of the claimed optical lens system comprising a lens having a first focal length, an electro-active region coupled to the lens, the electro-active region when activated, altering the focal length of a first portion of the lens system to a second focal length different from the first focal length and specifically further wherein the lens has two fixed focal lengths. Specifically, with respect to claims 275-277 and 285-286, none of the prior art either alone or in combination disclose or teach of the claimed optical lens system comprising a lens having a first focal length, an electro-active region coupled to the lens, the electro-active region when activated, altering the focal length of a first portion of the lens system above a 180 degree meridian of the lens to a second focal length different from the first focal length, the electro-active region positioned to refract less than all of the light passing through the lens, and specifically further wherein the electro-active region is releasably attached to the lens, or the lens system includes a polymer gel and a liquid crystal, or the electro-active region includes a metallic layer, or the lens is supported by a phoropter that contains a plurality of fixed focal length lenses.

Response to Arguments

Applicant's arguments filed 8/8/02 have been fully considered but, with respect to the above rejected claims, they are not persuasive. Specifically, with reference to the

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Japanese'323 reference, applicant argues that this reference does not disclose the electro-active region above a 180 degree meridian. However, as set forth in the rejection above, Japanese'323 teaches that an electro-active intermediate region can be located above the near region disclosed as "4" in the figures and further teaches that surface "4" can have various shapes including oval, elliptical or arched which would make obvious at least a portion of an electro-active region located above a 180 degree meridian as set forth in the rejection above. In reference to the Piosenka and Kern rejections, applicant argues that these references do not disclose the electro-optic region positioned to refract less than all of the light passing through the lens. However, while this limitation has been added to independent claim 259, it has not been added to independent claims 264-265, 282 and 293 and therefore these references, as applied above, are still applicable.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (703) 308-1286. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read 'Jordan M. Schwartz', with a stylized, cursive script.

Jordan M. Schwartz
Primary Examiner
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October 2, 2002